

7.34 Massachusetts NOx Ozone Season Program

(1) Massachusetts NOx Ozone Season Program General Provisions.

- (a) Purpose and Scope. The purpose of 310 CMR 7.34 is to control emissions of nitrogen oxides (NOx) during the ozone season (May 1st through September 30th of each year). 310 CMR 7.34 establishes a state-wide budget of TBD tons of NOx emissions from NOx Ozone Season Units during each ozone season.
- (b) Applicability. 310 CMR 7.34 applies to the owner or operator of any fossil fuel fired boiler, combustion turbine, or indirect heat exchanger that emits NOx to a stack in Massachusetts, and
 - 1. Has a maximum rated heat input of 250 MMBtu/hr or more; or
 - 2. Is an electric generating unit with a nameplate capacity of 15 MW or more.
- (c) New NOx Ozone Season Units. The owner or operator of a NOx Ozone Season Unit that commences operation after {date of promulgation} shall be subject to the requirements of 310 CMR 7.34.
- (d) Existing Units. A combustion unit that was subject to 310 CMR 7.32 and is still commercially operating as of {date of promulgation} is subject to the requirements of 310 CMR 7.34.
- (e) Permanently Retired Units. The owner or operator of a NOx Ozone Season Unit that is permanently retired after {date of promulgation} shall not be subject to the requirements in 310 CMR 7.34 provided that the owner or operator complies with the requirements of 310 CMR 7.34(4)(e) and 310 CMR 7.34(6)(c).
- (f) Averaging Emissions. The owner or operator of a NOx Ozone Season Facility shall not average ozone season NOx emissions with the ozone season NOx emissions of another NOx Ozone Season Facility or any facility subject to a NOx Ozone program in another state for purposes of determining total annual ozone season NOx emissions.

- (2) Definitions. The terms used in 310 CMR 7.34: *Massachusetts NOx Ozone Season Program* are defined at 310 CMR 7.34(2). Where a term is defined in both 310 CMR 7.00: *Definitions* and in 310 CMR 7.34 the definition in 310 CMR 7.34 shall apply.

Alternate SIPNOx Designated Representative means the person who has been authorized by the owners or operators of the facility in accordance with 310 CMR 7.34(5)(c) to act on behalf of the SIPNOx Designated Representative in matters pertaining to NOx emissions monitoring and the NOx Ozone Season Program.

Combustion Turbine means:

- 1. An enclosed device comprising of a compressor, a combustor, and a turbine and in which the flue gas resulting from the combustion of fuel in the combustor passes through the turbine, rotating the turbine; and
- 2. If the enclosed device is combined cycle, any associated duct burner, heat recovery steam generator, and steam turbine.

Commence Commercial Operation means, with regard to an emission unit that serves a generator, to have begun to produce steam, gas, or other heated medium used to generate electricity for sale or use, including test generation. For a non-electric generating unit, commence commercial operation means to have begun generating steam for process use or manufacturing of a good or product.

Cross-State Air Pollution Rule (CSAPR) means the regulation promulgated at 40 CFR 97 by the Administrator of the United States Environmental Protection Agency.

Cross-State Air Pollution Rule NOx Ozone Season Allowance means an allowance issued by the Administrator under the Cross-State Air Pollution Rule to emission sources to cover NOx emissions during the ozone season.

Emissions Budget means the amount of NOx emissions allocated by the Department to a NOx Ozone Season Facility for each ozone season as established in 310 CMR 7.34(7).

Fossil fuel fired means the combustion of fossil fuel or any derivative of fossil fuel alone, or, in combination with any other fuel, if fossil fuel comprises more than 50% of the annual heat input on a Btu basis. Once a unit is considered fossil fuel fired, the unit shall always be considered fossil fuel fired even if the fossil fuel no longer comprises more than 50% of the annual heat input on a Btu basis.

Indirect Heat Exchanger means combustion equipment in which the flame or the products of combustion are separated from any contact with the principal material in the process by metallic or refractory walls. It includes, but is not limited to, steam boilers, vaporizers, melting pots, heat exchangers, column reboilers, fractioning column feed preheaters, reactor feed preheaters, and fuel-fired reactors, such as steam hydrocarbon reformer heaters, and pyrolysis heaters.

Maximum Rated Heat Input means the maximum amount of fuel per hour (in Btu/hr) that a unit is capable of combusting on a steady-state basis as of the initial installation of the unit based on primary fuel used as specified in the NOx Ozone Season Facility's Operating Permit. For turbines the maximum rated heat input shall be established at International Organization for Standardization (ISO) conditions.

Monitoring System means a monitoring system that meets the requirements of 310 CMR 7.34(3) including a continuous emissions monitoring system, an alternative monitoring system, or an accepted monitoring system under 40 CFR Part 75, or as otherwise approved by the Department or the Administrator.

Nameplate Capacity means the maximum electrical generating output (in MWe) that a generator is capable of producing on a steady state basis during continuous operation (when not restricted by seasonal or other deratings) as specified by the manufacturer of the generator. If there is any subsequent physical change to the generator that increases the maximum electrical generating output the Nameplate Capacity shall be the increased maximum electrical generating output (in MWe) that the generator is capable of producing on a steady state basis during continuous operation (when not restricted by seasonal or other deratings).

New NOx Ozone Season Unit means a NOx Ozone Season Unit that commences operation on or after {promulgation date}.

NOx Ozone Season Facility means a facility that includes one or more NOx Ozone Season Units.

NOx Ozone Season Unit means a unit that is subject to the NOx Ozone Season Program under 310 CMR 7.34(1)(b).

Operator means any person who operates, controls, or supervises a NOx Ozone Season Unit or a NOx Ozone Season Facility including, but not be limited to, any holding company, utility system, or plant manager of such a unit or facility.

Owner means any of the following persons:

1. Any holder of any portion of the legal or equitable title in a NOx Ozone Season Unit or a NOx Ozone Season Facility; or
2. Any holder of a leasehold interest in a NOx Ozone Season Unit or a NOx Ozone Season Facility; or
3. Any purchaser of power from a NOx Ozone Season Unit or a NOx Ozone Season Facility under a life-of-the-unit, firm power contractual arrangement; provided that, unless expressly provided for in a leasehold agreement, owner shall not include a passive lessor, or a person who has an equitable interest through a passive lessor, whose rental payments are not based (either directly or indirectly) on the revenues or income from a NOx Ozone Season Unit or a NOx Ozone Season Facility.

Ozone Season means the period beginning May 1st of a calendar year, and ending on September 30th of the same year, inclusive.

Reference Method means any direct test method of sampling and analyzing for an air pollutant as specified in 40 CFR 75.22.

SIPNOx Source means any NOx Ozone Season Unit that is subject to the applicability requirements of 40 CFR 75.2 and is required, by the Administrator, to monitor and report NOx emissions under 40 CFR 75.

SIPNOx Designated Representative means the person who has been authorized by the owner or operator of the NOx Ozone Season Facility to represent and legally bind the owner or operator in matters pertaining to the Massachusetts NOx Ozone Season Program. If the NOx Ozone Season Facility is also a SIPNOx Source then this person shall be the same person as the SIPNOx Designated Representative for purposes of SIPNOx Source reporting.

Ton means 2,000 pounds. For the purpose of determining compliance with the NOx Ozone Season Budget, total tons of nitrogen oxides emissions for an ozone season shall be calculated as the sum of all recorded hourly emissions (or the mass equivalent of the recorded hourly emission rates) in accordance with 310 CMR 7.34(3)(c), but with any remaining fraction of a ton equal to or greater than 0.50 tons deemed to equal one ton and any remaining fraction of a ton less than 0.50 tons deemed to equal zero tons.

(3) Monitoring Requirements.

(a) Definitions and Terms. For purposes of complying with monitoring requirements, the definitions in 310 CMR 7.34 (2) and 40 CFR 72.2 shall apply, and the terms “affected unit,” “designated representative,” and “continuous emission monitoring system” (or “CEMS”) in 40 CFR Part 75 shall be deemed to refer to the terms “NOx Ozone Season unit,” “SIPNOx Designated Representative,” and “monitoring system,” respectively, as defined in 310 CMR 7.34(2).

(b) Monitoring Requirements. The owner or operator of a NOx Ozone Season Unit, shall install,

operate, and maintain a monitoring system to measure NO_x ozone season emissions in accordance with the provisions 40 CFR Part 75 subpart H.

(c) Mass Emissions Determination. The owner or operator of a NO_x Ozone Season Unit shall install all monitoring systems, including all systems required to monitor NO_x emission rate, NO_x concentration, stack gas moisture content, stack gas flow rate, CO₂ or O₂ concentration, and fuel flow rate, as applicable, in accordance with 40 CFR 75.71 and 40 CFR 75.72.

(d) Out of Control Periods. Whenever a monitoring system fails to meet the quality-assurance and quality-control requirements or data validation requirements of 40 CFR 75, data shall be substituted using applicable missing data procedures of 40 CFR Part 75 Subpart D, or H, or 40 CFR 75 Appendix D or E.

(e) Prohibitions. The owner or operator of a NO_x Ozone Season Unit shall not use any alternative monitoring system, alternative reference method, or any other alternative to any requirement of 310 CMR 7.34(3)(a) without prior written approval from the Department or Administrator.

(4) Reporting Requirements.

(a) General Requirements. The owner or operator, and to the extent applicable, the SIPNO_x Designated Representative, of a NO_x Ozone Season Unit, shall comply the reporting requirements of 40 CFR 75 subpart H and 310 CMR 7.34(4).

(b) SIPNO_x Source Quarterly Emissions Reporting. The SIPNO_x Designated Representative shall submit quarterly reports of NO_x mass emissions data and heat input data to the Administrator within 30 days following the end of the calendar quarter covered by the report in the manner specified in 40 CFR 75.73(f).

(c) Monthly Ozone Season NO_x Emissions Reporting. The SIPNO_x Designated Representative shall submit monthly ozone season NO_x emissions reports of NO_x mass emissions data, electronically to the Department within 15 days of the close of the month (monthly increments May – September) in a format prescribed by the Department, based on reasonable inquiry of those persons with primary responsibility for ensuring that all of the unit's emissions are correctly and fully monitored.

(d) Compliance Certification Reporting. The SIPNO_x Designated Representative shall submit a compliance certification to the Administrator in a format prescribed by the Administrator. The compliance certification shall be submitted in support of each quarterly report based on a reasonable inquiry of those persons with primary responsibility for ensuring that all of the unit's emissions are correctly and fully monitored. In the compliance certification the SIPNO_x Designated Representative shall certify that:

1. The monitoring data submitted were recorded in accordance with the applicable requirements of 310 CMR 7.34(3) and 40 CFR Part 75, including the quality assurance procedures and specifications;
 2. For a unit with add-on NO_x emission controls and for all hours where NO_x data are substituted in accordance with 40 CFR 75.34(a)(1), the add-on emission controls were operating within the range of parameters listed in the quality assurance/quality control program under appendix B to 40 CFR Part 75 and the substitute data values do not systematically underestimate NO_x emissions; and
 3. For a unit that is reporting on a control period basis under 310 CMR 7.34(4)(b), the NO_x emission rate and NO_x concentration values substituted for missing data under subpart D of 40 CFR Part 75 are calculated using only values from a control period and do not systematically underestimate NO_x emissions.
- (e) Permanently Retired Unit Reporting. Within 30 days of the permanent retirement of the unit

the SIPNOx Designated Representative shall submit a statement to the Department and a duplicate copy to the Administrator. In the statement the SIPNOx Designated Representative shall certify that:

1. The unit was permanently retired;
2. The date on which the unit was permanently retired;
3. The owner or operator, and to the extent applicable, the SIPNOx Designated Representative, shall comply with the records retention requirements of 310 CMR 7.34(4)(e).

(f) Certification of Reports. All reports submitted to the Department under the NOx Ozone Season Program must be signed and attested to by the SIPNOx Designated Representative or Alternate SIPNOx Designated Representative for the NOx Ozone Season Facility, and must include the following statement:

“I certify that I have personally examined the foregoing and am familiar with the information contained in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including possible fines and imprisonment.”

(5) SIPNOx Designated Representatives and Alternate SIPNOx Designated Representatives.

(a) Authorized SIPNOx Designated Representative. Each NOx Ozone Season Facility shall authorize one SIPNOx Designated Representative to act on behalf of the owner or operator with regard to all matters under the NOx Ozone Season Program concerning the facility or any NOx Ozone Season Program Unit at the facility.

(b) Certificate of Representation. The owner or operator of a NOx Ozone Season Program Facility shall, in the format prescribed by the Administrator, submit to the Administrator a complete certificate of representation for a SIPNOx Designated Representative and/or an Alternate SIPNOx Designated Representative.

(c) Alternate SIPNOx Designated Representative. A certificate of representation under 310 CMR 7.34(5)(b) may designate one Alternate SIP NOx Designated Representative who may act on behalf of the SIPNOx Designated Representative. Upon receipt by the Administrator of a complete certificate of representation under 310 CMR 7.34(5)(b), any representation, action, inaction, or submission by the Alternate SIPNOx Designated Representative shall be deemed to be a representation, action, inaction, or submission by the SIPNOx Designated Representative.

(d) Change of the SIPNOx Designated Representative or Alternate SIPNOx Designated Representative. The owner or operator may change the SIPNOx Designated Representative or the Alternate SIPNOx Designated Representative at any time by submitting a certificate of representation under 310 CMR 7.34(5)(b); such change shall be effective upon receipt by the Administrator.

(6) Recordkeeping Requirements.

(a) General Requirements. An owner or operator of a NOx Ozone Season Facility shall comply with all of the recordkeeping requirements of 40 CFR 75 Subpart H and 310 CMR 7.34(4).

(b) On-site Record Retention. An owner or operator of a NOx Ozone Season Facility shall keep on-site at the facility all records and reports required by 310 CMR 7.34(4) for a period of five years from the date the record or report is created. The Department may extend this period for cause, in writing, at any time before the end of the five years.

(c) Permanently Retired Units Record Retention. An owner or operator of a permanently

retired NOx Ozone Season Unit shall retain at the NOx Ozone Season Facility records demonstrating that the unit is permanently retired for a period of five years from the date the record is created. The Department or the Administrator may extend this period for cause, in writing, at any time before the end of the five years.

(7) NOx Ozone Season Emissions Budget.

(a) Massachusetts NOx Ozone Season Emissions Budget. Beginning May 1, 2016, and for each ozone season thereafter, the total state-wide emissions budget for existing and new NOx Ozone Season Units shall not exceed TBD tons.

(b) Emissions Budgets for Existing NOx Ozone Season Facilities. Beginning May 1, 2016, the emissions budget in 310 CMR 7.34(7)(b): *Table A* shall apply to each listed facility.

310 CMR 7.34(7)(b): Table A

FACILITY NAME	ORIS CODE	EMISSIONS BUDGET (Tons of NOx Per Ozone Season)
ANP Bellingham	55211	TBD
ANP Blackstone	55212	TBD
Berkshire Power Company LLC	55041	TBD
Braintree Electric	1660	TBD
Brayton Point Energy, LLC	1619	TBD
Dartmouth Power Associates	52026	TBD
Dighton Power LLC	55026	TBD
Essential Power Massachusetts Doreen St.	1631	TBD
Essential Power Mass LLC Woodland St.	1643	TBD
Exelon Framingham	1586	TBD
Exelon New Boston	1589	TBD
Exelon West Medway	1592	TBD
Fore River Energy Center	55317	TBD
General Electric Aircraft Engines	10029	TBD
Harvard University Blackstone Steam Plant	1594	TBD
NEA Bellingham	10307	TBD
NRG Canal Station	1599	TBD
Kendall Green Energy LLC	1595	TBD
Kneeland St. Station	880023	TBD
L'Energia Energy Center	54586	TBD
Masspower	10726	TBD
MWRA Deer Island	10823	TBD
Milford Power LLC	54805	TBD
Millennium Power Partners	55079	TBD
Massachusetts Institute of Technology	54907	TBD
MBTA South Boston Power	10176	TBD
Mystic Station	1588	TBD
Peabody Municipal Light Plant – Waters River	1678	TBD
Pittsfield Generating Company LP	50002	TBD

Stony Brook Energy Center	6081	TBD
Taunton Municipal Light Plant – Cleary Flood	1682	TBD

(c) Permanently Retired Units. The owner or operator of a permanently retired unit shall not operate during the ozone season.

(d) New Unit Set-Aside. Beginning May 1, 2016, the Department shall set aside TBD tons of NO_x per ozone season for New NO_x Ozone Season Units.

(e) Emissions Budgets for New NO_x Ozone Season Units and Facilities. Beginning May 1, 2016, the owner or operator of a New NO_x Ozone Season Unit or Facility shall not operate during the ozone season without first obtaining a written determination from the Department of an emissions budget which may be obtained by submitting an Emissions Budget Request to the Department in a format prescribed by the Department. An Emissions Budget Request shall be submitted to the Department at least 45 days before the beginning of the ozone season.

(f) Determination of Emissions Budget for a New NO_x Ozone Season Unit or Facility. The Department shall base its determination of an emissions budget for a New NO_x Ozone Season Unit or Facility as follows;

1. For a new or existing NO_x Ozone Season Facility that installs a New NO_x Ozone Season Unit comprised of a combustion turbine with SCR the Department shall base its determination on the New NO_x Ozone Season Unit's maximum permitted ozone season emissions in tons.
2. For a new or existing NO_x Ozone Season Facility that installs a New NO_x Ozone Season Unit comprised of any other type of equipment the Department shall base its determination on a maximum ozone season emission rate of TBD lb/MMBtu, multiplied by the maximum rated heat input in MMBtu/hr, multiplied by the total number of hours in the ozone season (3,672 hours/year), divided by 2,000 lb/ ton.

$$\text{Emissions Budget} = (\text{TBD lb/MMBtu}) \times (\text{MMBtu/hr}) \times 3,672 \text{ hr/yr.} \div 2,000 \text{ lb/ton}$$

(8) Budget Exceedance and Required Actions.

(a) If the Department determines that the Massachusetts NO_x Ozone Season state-wide Emissions Budget of TBD tons of NO_x is exceeded, the Department shall notify the owner or operator of each NO_x Ozone Season Facility that emitted greater than the facility's Emissions Budget listed in Table A in 310 CMR 7.34(7)(b) or allocated pursuant to 310 CMR 7.34(7)(c) no later than 30 days after the close of the ozone season, and within 60 days of being notified by the Department, each such NO_x Ozone Season Facility, shall:

1. Transfer to the Department CSAPR NO_x Ozone Season allowances at a rate of one NO_x Ozone Season Allowances for every one ton of excess emissions above the unit's emissions budget; or
2. Surrender to the Department emission reduction credits (ERCs), that have been certified by the Department pursuant to 310 CMR 7.00: Appendix B(3), at a rate of one ozone season NO_x ERC from the Mass ERC Bank for every one ton of excess emissions above the unit's emissions budget.

(b) The Department may request NO_x emissions data or any additional related information from any NO_x Ozone Season Facility during or after the applicable ozone season for verification purposes.